APPENDIX 2

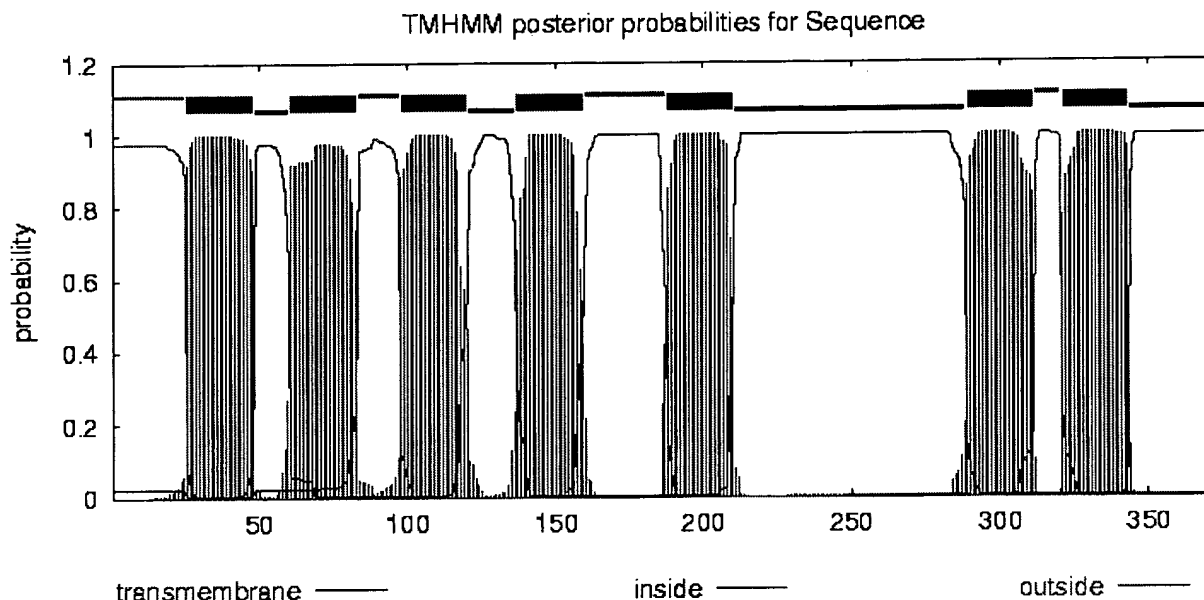TMHMM posterior probabilities for Sequence

transmembrane ———   inside ———   outside ———

A.   TMHMM result

HELP with output formats

```
# Sequence Length: 373
# Sequence Number of predicted TMHs:  7
# Sequence Exp number of AAs in TMHs: 156.69396
# Sequence Exp number, first 60 AAs:  23.36212
# Sequence Total prob of N-in:        0.02414
# Sequence POSSIBLE N-term signal sequence
Sequence        TMHMM2.0        outside     1     25
Sequence        TMHMM2.0        TMhelix    26     48
Sequence        TMHMM2.0        inside     49     60
Sequence        TMHMM2.0        TMhelix    61     83
Sequence        TMHMM2.0        outside    84     97
Sequence        TMHMM2.0        TMhelix    98    120
Sequence        TMHMM2.0        inside    121    136
Sequence        TMHMM2.0        TMhelix   137    159
Sequence        TMHMM2.0        outside   160    187
Sequence        TMHMM2.0        TMhelix   188    210
Sequence        TMHMM2.0        inside    211    288
Sequence        TMHMM2.0        TMhelix   289    311
Sequence        TMHMM2.0        outside   312    320
Sequence        TMHMM2.0        TMhelix   321    343
Sequence        TMHMM2.0        inside    344    373
```

plot in postscript, script for making the plot in gnuplot, data for plot

Conserved Tryptophan and Proline in TM6

GPCR	TM6 as predicted by TMHMM
hARE-2	YAITLLFLLLWSPYIVACYWRVF
ghrelin receptor	MLAVVVFAFILCWLPFHVGRYLF
CXCR3 chemokine receptor	LVVVVVVAFALCWTPYHLVV
5-hydroxytryptamine (serotonin) receptor 2A	LGIVFFLFVVMWCPFFITNIMAV
5-hydroxytryptamine (serotonin) receptor 2B	GIVFFLFLLMWCPFFITNITLVL
5-hydroxytryptamine (serotonin) receptor 2C	VLGIVFFVFLIMWCPFFITNILS
dopamine receptor D3	VAIVLGAFIVCWLPFFLTHVLNT
dopamine receptor D1	TLSVIMGVFVCCWLPFFILNCIL
histamine receptor H3	AVIVSIFGLCWAPYTLLMIIRAA
galanin receptor 1	TVLVVVVVFGISWLPHHIIHLWA
neuropeptide Y receptor Y1	IMLLSIVVAFAVCWLPLTIFNTV
neurotensin receptor 1	VLRAVVIAFVVCWLPYHVRRLMF
melanocortin 4 receptor	ITLTILIGVFVVCWAPFFLHLIF
adenosine A1 receptor	LALILFLFALSWLPLHILNCITL
cannabinoid receptor 1	LVLILVVLIICWGPLLAIMVYDV